



User interface with PLC for rear mounting as SWD coordinator, 24VDC, 7-inch PCT displ., 1024x600 pixels, 2x Ethernet, 1x RS232, 1x RS485, 1x CAN, 1x SWD, 1x SD

**Part no. XV-313-70-CE0-A00-1C
191003**

General specifications		
Product name		Eaton XV-313 Touch panel
Part no.		XV-313-70-CE0-A00-1C
EAN		7640130099050
Product Length/Depth		209 millimetre
Product height		50 millimetre
Product width		151 millimetre
Product weight		0.8 kilogram
Certifications		DNV GL CUL UL File No.: E205091 UL 61010-2-201 Certified by UL for use in Canada EN 50178 UL CE IEC/EN 61131-2 EMC according to 2014/30/EU
Product Tradename		XV-313
Product Type		Touch panel
Product Sub Type		None
Features & Functions		
Enclosure material		Insulated material
Features		Target and web visualization Fanless CPU and system cooling, natural convection-based passive cooling Operating System Windows Embedded Compact 7 pro USB device Overload proof Integrated Runtime visualization software license USB Host Portrait format RS232 RS485 Ethernet interface CAN Slot for SD card
Fitted with:		2 x Ethernet 10/100 Mbps (built-in interface) 1 x CANopen®/easyNet (built-in interfaces) 1 x USB device (built-in interface) Message system (incl. buffer and confirmation) 1 x SmartWire-DT (built-in interface) Printer output 1 x USB host 2.0 (built-in interface) Color display Recipes Message indication SW interfaces 1 x RS485 (built-in interface) 1 x RS232 (built-in interface)
Functions		Additional software components, loadable Process default value (input) possible SmartWire-DT coordination Process value representation (output) possible
General information		
Battery runtime		Back-up of real-time clock: BR 2330, non-replaceable (soldered)
Degree of protection		NEMA 12 IP20, rear (according to EN 60529-1) NEMA 4X
Degree of protection (front side)		NEMA 12 IP65
Fuse type		Built-in fuse (not accessible)
Lifespan		50,000 h (Service life of back-lighting)
Model		Plastic enclosure and glass panel in aluminum mounting frame

Mounting method		Rear mounting Flush mounting - Inclination from vertical: $\pm 45^\circ$ (if using natural convection) Flush mounting - Clearance: Width x Height x Depth ≥ 30 mm (1.18")
Potential isolation		Between UPOW and 15 V SmartWire-DT supply voltage: no Power supply: no Supply voltage UAUX: no
Protection against polarity reversal		Yes, for supply voltage (Siemens MPI optional) Yes
Product category		SmartWire-DT coordinators
Repetition rate		1 s
Residual ripple		≤ 5 % (input voltage)
RoHs conformity		Yes
Short-circuit protection		No, external fuse FAZ Z3, Supply voltage UAux Yes, Short-circuit rating, SmartWire-DT supply voltage
Software		XSOFT-CODESYS-3, PLC-Programming software, Engineering XSOFT-CODESYS-2, PLC-Programming software, Engineering XSOFT-CODESYS, Visualization software, Engineering GALILEO, Visualization software, Engineering
Terminal capacity		24 - 16 AWG, solid or stranded 0.2 - 1.5 mm ² , solid 0.25 - 1.5 mm ² , flexible with ferrule
Type		Control panel with PLC as a SmartWire-DT coordinator and 2nd Ethernet port
Voltage type		DC
Ambient conditions, mechanical		
Shock resistance		15 g, 11 ms, Mechanical
Vibration resistance		9 - 60 Hz, ± 0.15 mm 5 - 9 Hz, ± 3.5 mm 60 - 150 Hz, ± 2 g
Climatic environmental conditions		
Air pressure		795 - 1080 hPa (operation)
Ambient operating temperature - min		0 °C
Ambient operating temperature - max		50 °C
Ambient storage temperature - min		-20 °C
Ambient storage temperature - max		60 °C
Climatic proofing		Cold to EN 60068-2-1 Dry heat to IEC 60068-2-2 Damp heat, constant, to IEC 60068-2-3
Environmental conditions		Condensation: Non-condensing
Operating temperature - min		0 °C
Operating temperature - max		50 °C
Relative humidity		10 - 95 % (non-condensing)
Electro magnetic compatibility		
Emitted interference		According to IEC/EN 61000-6-4
Interference immunity		According to EN 61000-6-2
Voltage dips		≤ 10 ms, Bridging voltage dips ≤ 10 ms from rated voltage (24 V DC) 5 ms from undervoltage (19.2 V DC)
Electrical rating		
Inrush current		12.5 A (for 6 ms)
Permissible voltage		18 - 31.2 V DC, battery powered (rated operating voltage -25 %/+30 %) 19.2 - 30 V DC, effective (rated operating voltage -20 %/+25 %) 18.0 - 31.2 V DC, absolute with ripple 35 V DC (for a duration of < 100 ms)
Power consumption		11.9 W Max. 14.4 W 14 W typ.
Rated control supply voltage		24 V DC (UAUX, -15 %/+20 %) 24 V DC (UPOW, -15 %/+20 %)
Rated operational current (Ie)		0.7 A
Rated operational voltage		Typically UAUX -0.2 V (for 24 V DC slaves) 24 V DC (power-supply - safety extra low voltage) 14.5 V (± 3 % - SmartWire-DT)
Supply current		If contactors with a total power consumption > 3 A are connected, a power feeder module EU5C-SWD-PF1/2 has to be used, Supply voltage UAux If SmartWire-DT modules with a total power consumption > 0.7 A are connected, a power feeder module EU5C-SWD-PF2 has to be used; SmartWire-DT supply 0.7 A, I _{max} , SmartWire-DT supply

		3 A, I _{max} , Supply voltage UAux
Supply voltage at AC, 50 Hz - min		0 V AC
Supply voltage at AC, 50 Hz - max		0 V AC
Supply voltage at DC - min		19.2 V DC
Supply voltage at DC - max		30 V DC
Communication		
Addressing		Address set automatically
Communication interface		SmartWire-DT master
Connection		SmartWire-DT blade terminal SWD4-8MF2
Connection to SmartWire-DT		Yes
Connection type		SWD: Plug, 8-pole Push in terminals, Supply voltage
Data transfer rate		125 kBit/s, SmartWire-DT 250 kBit/s, SmartWire-DT
Interfaces		CAN (not galvanically isolated, 9-pin SUB-D plug, UNC) USB 2.0 host (not galvanically isolated) RS232 (not galvanically isolated, 9-pin SUB-D plug, UNC) USB 2.0 device (not galvanically isolated) RS485 (not galvanically isolated, 9-pin SUB-D plug, UNC) 10/100 Mbps Ethernet connection
LED indicator		Status indication of SmartWire-DT network: Configurable green or red LED Status indication of SmartWire-DT master: Green and red LEDs Status indication of Supply voltage: LED
Number of slots		1 (for SD-Card)
Number of SmartWire-DT slaves		99
Protocol		EtherCAT MODBUS CAN EtherNet/IP TCP/IP
Station		SmartWire-DT master, SmartWire-DT network
Display		
Display contrast ratio		500:1
Display lighting		LED Dimmable via software
Display size		16:9 153.6 x 90.0 mm
Display type		TFT Color display, TFT, anti-glare Anti-glare tempered glass without bezel
Luminance intensity		400 cd/m ²
Number of colors of the display		16777216
Resolution		WSVGA 1024 x 600 px
Screen size (diagonal)		7 in
Touch technology		Capacitive multitouch Projected Capacitive Touch (PCT) Multi-touch touch panel touch sensor
System		
Backup time		10 years, typ. (time at zero voltage)
Memory		SD card, Type: SDSC, SDHC (external memory) NVRAM: 128kByte Retain Flash: 1 GByte SLC DRAM: 512 MByte RAM
Memory capacity		512,000 kByte
Operating system		Windows Embedded Compact 7 Pro
Processor		ARM Cortex-A9 800 MHz
Design verification		
Equipment heat dissipation, current-dependent P _{vid}		14.4 W
Heat dissipation capacity P _{diss}		0 W
Heat dissipation per pole, current-dependent P _{vid}		0 W
Rated operational current for specified heat dissipation (I _n)		0 A
Static heat dissipation, non-current-dependent P _{vs}		14.4 W
10.2.2 Corrosion resistance		Meets the product standard's requirements.

10.2.3.1 Verification of thermal stability of enclosures		Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat		Meets the product standard's requirements.
10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects		Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation		Please enquire
10.2.5 Lifting		Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact		Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions		Meets the product standard's requirements.
10.3 Degree of protection of assemblies		Meets the product standard's requirements.
10.4 Clearances and creepage distances		Meets the product standard's requirements.
10.5 Protection against electric shock		Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components		Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections		Is the panel builder's responsibility.
10.8 Connections for external conductors		Is the panel builder's responsibility.
10.9.2 Power-frequency electric strength		Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage		Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material		Is the panel builder's responsibility.
10.10 Temperature rise		The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating		Is the panel builder's responsibility.
10.12 Electromagnetic compatibility		Is the panel builder's responsibility.
10.13 Mechanical function		The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 9.0

Programmable logic controllers PLC (EG000024) / Graphic panel (EC001412)		
Electric engineering, automation, process control engineering / Display and control component / Panel (HMI) / Graphic panel (HMI) (ecl@ss13-27-33-02-01 [AFX016008])		
Supply voltage AC 50 Hz	V	0 - 0
Supply voltage AC 60 Hz	V	0 - 0
Supply voltage DC	V	19.2 - 30
Voltage type (supply voltage)		DC
Power consumption	W	14
Number of HW-interfaces industrial Ethernet		2
Number of interfaces PROFINET		0
Number of HW-interfaces RS-232		1
Number of HW-interfaces RS-422		0
Number of HW-interfaces RS-485		1
Number of HW-interfaces serial TTY		0
Number of HW-interfaces USB		2
Number of HW-interfaces parallel		0
Number of HW-interfaces wireless		0
Number of HW-interfaces other		1
With SW interfaces		Yes
Supporting protocol for EtherCAT		Yes
Supporting protocol for TCP/IP		Yes
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		Yes
Supporting protocol for INTERBUS		No
Supporting protocol for ASI		No
Supporting protocol for KNX		No
Supporting protocol for Modbus		Yes
Supporting protocol for Data-Highway		No
Supporting protocol for DeviceNet		No
Supporting protocol for SUCONET		No
Supporting protocol for LON		No
Supporting protocol for PROFINET IO		No
Supporting protocol for PROFINET CBA		No

Supporting protocol for SERCOS		No
Supporting protocol for Foundation Fieldbus		No
Supporting protocol for EtherNet/IP		Yes
Supporting protocol for AS-Interface Safety at Work		No
Supporting protocol for DeviceNet Safety		No
Supporting protocol for INTERBUS-Safety		No
Supporting protocol for PROFIsafe		No
Supporting protocol for SafetyBUS p		No
Supporting protocol for other bus systems		No
Radio standard Bluetooth		No
Radio standard WLAN 802.11		No
Radio standard GPRS		No
Radio standard GSM		No
Radio standard UMTS		No
IO link master		No
Type of display		TFT
Colour display		Yes
Number of colours of the display		16777216
Number of grey-scales/blue-scales of display		0
Screen diagonal	inch	7
Number of pixels, horizontal		1024
Number of pixels, vertical		600
Useful project memory/user memory	kByte	512000
With numeric keyboard		No
With alpha numeric keyboard		No
Number of function buttons, programmable		0
Number of buttons with LED		0
Number of system buttons		1
Touch technology		Capacitive multitouch
With message indication		Yes
With message system (incl. buffer and confirmation)		Yes
Process value representation (output) possible		Yes
Process default value (input) possible		Yes
With recipes		Yes
Number of password levels		200
With printer output		Yes
Number of online languages		100
Additional software components, loadable		Yes
Degree of protection (IP), front side		IP65
Degree of protection (NEMA), front side		12
Certified for UL hazardous location class I		No
Certified for UL hazardous location class II		No
Certified for UL hazardous location class III		No
Certified for UL hazardous location division 1		No
Certified for UL hazardous location division 2		No
Certified for UL hazardous location group A (acetylene)		No
Certified for UL hazardous location group B (hydrogen)		No
Certified for UL hazardous location group C (ethylene)		No
Certified for UL hazardous location group D (propane)		No
Certified for UL hazardous location group E (metal dusts)		No
Certified for UL hazardous location group F (carbonaceous dusts)		No
Certified for UL hazardous location group G (non-conductive dusts)		No
Operating temperature	°C	0 - 50
Rail mounting possible		No
Wall mounting/direct mounting		No

Suitable for safety functions		No
Width of the front	mm	404
Height of the front	mm	255
Built-in depth	mm	43.1